

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-45 (Cancelled)

46. (Previously Presented) An apparatus configured to provide haptic sensations to a user, comprising:

a manipulandum;

a processor configured to receive position signals relating to movement of the manipulandum, the processor configured to output a position based force signal when the manipulandum is sensed throughout a detent and configured to output a predetermined time-based force signal only once when the manipulandum is within the detent; and

an actuator configured to output a first haptic feedback force to the manipulandum upon receiving the position based force signal and configured to output a second haptic feedback force to the manipulandum upon receiving the position based force signal and the predetermined time-based force signal when the manipulandum reaches a threshold position within the detent.

47. (New) The apparatus of claim 46, wherein the manipulandum is a rotatable knob.

48. (New) The apparatus of claim 46, wherein the predetermined time-based force signal comprises a single time-based waveform.

49. (New) The apparatus of claim 46, wherein the predetermined time-based force signal comprises a plurality of time-based waveforms.

50. (New) The apparatus of claim 46, wherein the predetermined time-based force signal is represented by at least one of: a saw tooth wave, a square wave, a pulse, a full sine wave, a half sine wave, or a triangle wave.

51. (New) The apparatus of claim 46, wherein the manipulandum is a depressible button of a communication device.
52. (New) The apparatus of claim 46, wherein the manipulandum is a depressible button of a video game controller.
53. (New) The apparatus of claim 46, wherein the manipulandum is a depressible button of a computer mouse.
54. (New) A method for outputting haptic sensation, comprising:  
sensing movement of a manipulandum between a first position and a second position of a detent;  
outputting a position-based force signal to an actuator coupled to the manipulandum, the position-based force signal associated with the manipulandum being sensed from the first position to the second position;  
outputting a first haptic feedback force via the actuator upon receiving the position-based force signal when the manipulandum is moving between the first and second positions; and  
outputting a second haptic feedback force via the actuator only once upon sensing the manipulandum at a threshold position between the first and second positions, the second haptic feedback including a predetermined time-based force signal.
55. (New) The method of claim 54, wherein the second haptic feedback force includes the position-based force signal.
56. (New) The method of claim 54, wherein the predetermined time-based force signal is associated with a predetermined time-based waveform.
57. (New) The method of claim 54, further comprising:  
outputting a biasing force configured to oppose movement of the manipulandum from the first position to the second position.

58. (New) The method of claim 54, further comprising:  
accessing the predetermined time-based force signal stored within a processor-readable medium in response to sensing the manipulandum at the threshold position.
59. (New) The method of claim 54, further comprising:  
outputting a biasing force configured to oppose the manipulandum being moved from the first position to the second position using a virtual spring.
60. (New) The method of claim 54, further comprising:  
outputting a biasing force configured to oppose the manipulandum being moved from the first position to the second position using a physical spring.
61. (New) The method of claim 54, further comprising:  
outputting a biasing force configured to oppose the manipulandum being moved from the first position to the second position; and  
outputting a third haptic feedback force in response to sensing the manipulandum being moved from the second position to the first position.
62. (New) The method of claim 54, further comprising:  
determining a velocity at which the manipulandum is moved between the first and second positions; and  
modifying a characteristic of the first haptic feedback force in response to the velocity of the manipulandum.
63. (New) The method of claim 54, wherein the predetermined time-based force signal includes a plurality of predetermined time-based waveforms.
64. (New) The method of claim 54, wherein the predetermined time-based force signal includes a single predetermined time-based waveform.

65. (New) The method of claim 54, wherein the predetermined time-based force signal has a period in a range of about 1 ms to about 300 ms.

66. (New) The method of claim 54, further comprising:

selecting a predetermined time-based waveform associated with the predetermined time-based force signal; and

inputting a signal associated with the selected predetermined time-based waveform into a controller, the controller configured to control the actuator based on the signal associated with the selected predetermined time-based waveform when the manipulandum is disposed at the threshold position.

67. (New) The method of claim 54, further comprising:

outputting a hysteresis effect when the manipulandum is disposed at the threshold position.

68. (New) An apparatus, comprising:

a manipulandum;

a sensor configured to sense movement of the manipulandum between a first position and a second position of a detent, wherein the sensor is configured to output a positional signal when the manipulandum is sensed moving from the first position to the second position; and

an actuator configured to output a first haptic feedback force to the manipulandum in response to the positional signal indicating the manipulandum moving between the first position and the second position, wherein the first haptic feedback force corresponds to a position based force signal, the actuator configured to output a second haptic feedback force to the manipulandum only once in response to the positional signal indicating the manipulandum at a threshold position between the first and second positions, the second haptic feedback force including the position based force signal and a predetermined time-based force signal.